REMARKS

The Applicant has amended the specification and abstract to more clearly convey subject matter therein. No new matter has been added.

Respectfully submitted,

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John W. Olivo, Jr.
Reg. No. 35,634
Ward & Olivo
382 Springfield Ave.
Summit, NJ 07901
908-277-3333

MARKED-UP VERSION OF AMENDED SPECIFICATION AND ABSTRACT

The paragraph located on page 2, line 20 through page 3, line 3:

--(AMENDED) The prior art is strikingly devoid of references dealing with toroidal vortices in a vacuum cleaner application. However, an Australian reference has some similarities. This Australain refernce does not approach the scope of the present invention, but it is worth [disusing] discussing its key features of operation so that one skilled in the art can readily see how its shortcomings are overcome by [that which is] the present invention disclosed herein.--

The paragraph located on page 6, line 18 through page 7, line 2:

--(AMENDED) Air leakage is exacerbated by rotation in the air delivery duct caused by the pumping fan. Air leaving the output nozzle rotates so that centrifugal force spreads out the airflow into a cone. This results in the generation of a larger amount of stray air. [The effect is to generate a higher quantity of stray air.] Air rotation can be eliminated by adding flow straightening vanes to the

air delivery duct, but these are neither mentioned nor illustrated in the Day publication.--

The paragraph located on page 9, lines 1-3:

--(AMENDED) Another reason for maintaining sealed operation [when away from the surface] is to prevent the vacuum cleaner nozzle from blowing surface dust around when it is held at a distance from the surface.--

The paragraph located on page 17, lines 17-22:

--(AMENDED) Unlike other vacuum cleaners that employ centrifugal dust separation (e.g., the "cyclone" types discussed previously), the present invention spins the air around at the blade speed of the impeller. Thus, the system acts like a high speed centrifuge capable of removing very small particles from the airflow. Therefore, no [No] vacuum bag, liquid bath, or filter is required.--

The paragraph located on page 33, lines 6-14:

--(AMENDED) The preferred embodiment in FIG. 16 has air mixed with dirt and dust passing through the impeller 1609. If such an arrangement is considered undesirable, the addition of a trap for large debris may be inserted

into the air return path upstream of the impeller 1609. Additionally, the impeller may be replaced with axial air pump or propeller. Such devices may be mounted in the inner tube 1601. The inner tube 1601 may be swelled out for this purpose. [Also, the addition of a separate centrifugal separator is contemplated that may be inserted into the air return path and may be driven by the same motor shaft as the impeller 1609.]--